



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,493	09/15/2003	Yuuichirou Tsuruta	0505-1245P	9236
2292	7590	07/19/2007	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				EDWARDS, LOREN C
ART UNIT		PAPER NUMBER		
		3748		
NOTIFICATION DATE		DELIVERY MODE		
		07/19/2007		
		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailto:mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/661,493	TSURUTA, YUUICHIROU
	Examiner Loren C. Edwards	Art Unit 3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 27 June 2007.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1 and 3-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1 and 3-21 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 15 September 2003 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
    Paper No(s)/Mail Date \_\_\_\_\_  
  
4)  Interview Summary (PTO-413)  
    Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/27/07 has been entered.
2. Claim 2 has been canceled; claims 1 and 11 have been amended; and claim 21 has been added. Overall, claims 1, and 3-21 are pending in the application.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 7, 9, 10, 11, 12, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hoeptner, III (U.S. 4,955,193). Hoeptner discloses a heat shield for a vehicle having an exhaust system member extending from an exhaust port of an internal combustion engine, the heat shield comprising: a first heat shield plate for surrounding a curved section of the exhaust system member (Fig. 2, No. 13; Fig. 1, No. 10b), the curved section being provided in the vicinity of the exhaust port; a second heat shield plate for covering above a straight section of the exhaust system member (Fig. 2,

No. 13; Fig. 1, No. 10a), the straight section connecting to the curved section (Figs. 4a and 4b); and a band member for supporting the first heat shield plate on the exhaust system member (Fig. 3, No. 26), wherein a small diameter section is provided on an end section of the first heat shield plate (Fig. 4a), and an end section of the second heat shield plate overlaps the small diameter section along a length of the exhaust system member, with a gap (Fig. 4b, l1 and l2) being provided in a radial direction between the small diameter section of the first heat shield plate and the end section of the second heat shield plate, wherein flow from a front side of the vehicle passes through the gap between the first and second heat shield plates (Col. 2, Lines 33-48; Fig. 4b). The examiner notes that Hoeptner teaches that the shield will protect the rider from burning their leg. This necessarily means that the shield is exposed and when the vehicle is moving forward airflow will pass through the outer gap formed between sections of the shield, and thereby meeting the claim language.

5. With regards to claim 7, Hoeptner discloses the heat shield for an internal combustion engine exhaust system of claim 1, as described above, and further wherein an end of the first heat shield plate adjacent to the exhaust port of the engine includes projection sections (Fig. 6a; No. 15), and the band member presses the projection section against the exhaust system member to attach the first heat shield plate to the exhaust system member (Fig. 3).

6. With regards to claim 9, Hoeptner discloses the heat shield for an internal combustion engine exhaust system of claim 2, as described above, and further wherein

the small diameter section of the first heat shield plate includes projections fitting into sections of the exhaust system member (Fig. 6a).

7. With regards to claim 10, Hoeptner discloses the heat shield for an internal combustion engine exhaust system of claim 1, as described above, and further wherein an intermediate portion of the first heat shield plate has a diameter larger than a diameter of an exhaust system member, and the band member wraps around the intermediate portion of the first heat shield plate (Figs. 4a and 4b).

8. With regards to claim 11, Hoeptner discloses a heat shield for an exhaust system member extending from an exhaust port of an internal combustion engine, comprising: a first heat shield plate for surrounding substantially all of a curved section of the exhaust system member (Fig. 2, No. 13; Fig. 1, No. 10b), the curved section of the exhaust system member extending from the exhaust port; a second heat shield plate mounted over a straight section of the exhaust system member (Fig. 2, No. 13; Fig. 1, No. 10a), the straight section connecting to the curved section (Figs. 4a and 4b); and a band member (Fig. 3, No. 26) for supporting the first heat shield plate on the exhaust system member, wherein the first heat shield plate is formed as a single plate (Fig. 3, No. 11) extending along at least half way along the curved section of the exhaust system member, wherein flow from a front side of the vehicle passes through a gap between the first and second heat shield plates (Col. 2, Lines 33-48; Fig. 4b).

9. With regards to claim 12, Hoeptner discloses the heat shield of claim 11, as described above, and further wherein a small diameter section is provided on an end section of the first heat shield plate (Fig. 4a), and an end section of the second heat

shield plate overlaps the small diameter section along a length of the exhaust system member, with a gap (Fig. 4b, I1 and I2) in a radial direction being provided between the small diameter section of the first heat shield plate and the end section of the second heat shield plate.

10. With regards to claim 17, Hoeptner discloses the heat shield of claim 11, as described above, and further wherein an end of the first heat shield plate adjacent to the exhaust port of the engine includes projection sections (Fig. 6a; No. 15), and the band member presses the projection sections against the exhaust system member to attach the first heat shield plate to the exhaust system member (Fig. 3).

11. With regards to claim 19, Hoeptner discloses the heat shield of claim 12, as described above, and further wherein the small diameter section of the first heat shield plate includes projections fitting into sections of the exhaust system member (Fig. 6a).

12. With regards to claim 20, Hoeptner discloses the heat shield of claim 11, as described above, and further wherein an intermediate portion of the first heat shield plate has a diameter larger than a diameter of an exhaust system member, and the band member wraps around the intermediate portion of the first heat shield plate (Figs. 4a and 4b).

#### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claims 3, 4, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoeptner in view of design choice. Hoeptner discloses the heat shield of claims 1 and 11, as described above, but fails to specifically describe wherein the exhaust system member is a U-shaped exhaust pipe which extends forwardly from the exhaust port of the engine, curves rearward, and extends in a substantially straight manner along one side of the engine to a position where the U-shaped exhaust pipe joins a middle pipe, or wherein the U-shaped pipe is formed as a one-part pipe. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use a one-part U-shaped exhaust pipe because Applicant has not disclosed that the shape of the exhaust pipe provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Hoeptner's exhaust pipe and applicant's invention, to perform equally well with the shape described in Figure 1 of Hoeptner or claims 3, 4, 13, and 14 because both shapes would perform the same function of routing exhaust gases from an engine considering their intended use. Therefore, it would have been *prima facie* obvious to modify Hoeptner to obtain the invention as

specified in claims 3, 4, 13, and 14 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Hoeptner.

16. Claims 5, 6, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoeptner in view of Wolf et al. (U.S. 5,816,043). Hoeptner discloses the heat shield of claim 1, as described above, but fails to specifically describe wherein the first heat shield plate includes an upper plate and a lower plate which mate together to surround an entire outer circumference of the curved section of the exhaust system member. Wolf discloses a heat shield for an internal combustion engine application that teaches to mate an upper and lower plate together to completely surround the outer circumference of a curved section of an exhaust member (Wolf; Figs. 1, 2, 4A and 4B). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the complete covering of the exhaust member as taught by Wolf in the shield of Hoeptner for the advantage of shielding all parts of the hot surface to minimize heat build up in the engine (Wolf; Col. 1, Lines 24-28).

17. With regards to claim 6, the modified Hoeptner discloses the heat shield of claim 5, as described above, and further wherein the upper plate and the lower plate are joined by a band member (Wolf; Fig. 2, No. 48).

18. With regards to claim 15, Hoeptner discloses the heat shield of claim 11, as described above, but fails to specifically describe wherein the first heat shield plate includes an upper plate and a lower plate (Wolf; Figs. 1, 2, 4A and 4B) each having flanges on inner and outer edges thereof (Wolf; Claim 1), the flanges of the upper plate

mating with the flanges of the lower plate, so that the upper plate and the lower plate surround the exhaust member. Wolf discloses a heat shield for an internal combustion engine application that teaches a heat shield plate with an upper plate and a lower plate, each having flanges on inner and outer edged thereof, the flanges of the upper plate mating with the flanges of the lower plate, so that the upper plate and the lower plate surround the exhaust system member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the complete covering of the exhaust member and joining technique for the covering as taught by Wolf in the shield of Hoeptner for the advantage of shielding all parts of the hot surface to minimize heat build up in the engine (Wolf; Col. 1, Lines 24-28).

19. With regards to claim 16, the modified Hoeptner discloses the heat shield of claim 15, as described above, and further wherein the upper plate and the lower plate are joined by the band member (Wolf; Fig. 2, No. 48) and surround an entire outer circumference of the curved section of the exhaust system member (Wolf; Fig. 2).

20. Claims 8, 18, and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoeptner in view of Dodge (U.S. 2,651,094). With regards to claims 8 and 18, Hoeptner discloses the heat shield of claims 1 and 11, as described above, and further wherein the end section of the first heat shield plate away from the exhaust port is fixed tightly around the exhaust system member by the band member (Hoeptner; Fig. 3, No. 26), and the end section of the second heat shield plate extends forwardly over the band member (Hoeptner; Fig. 3, Nos. 11 and 26), the end section of the second heat shield member being fixed to the exhaust system member by an attachment fixture (Hoeptner;

Fig. 3, Nos. 11 and 26), the attachment fixture providing a space between the second heat shield plate and the exhaust system member through which air passes during travel (Hoeptner; Fig. 3; Col. 2, Lines 33-48; Fig. 4b). Hoeptner fails to specifically disclose wherein the attachment member includes a bolt. Dodge discloses a band clamp for tubing or hoses (Dodge; Fig. 1) that includes a bolt (Dodge; Fig. 1, No. 39). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the band clamp of Dodge as the band claim in Hoeptner for the advantage of a clamp which is simple, inexpensive, efficient, and durable (Dodge; Col. 1, Lines 33-36).

21. With regards to claim 21, the modified Hoeptner, as described in rejecting claims 8 and 18 above, discloses a heat shield for a vehicle having an exhaust system member extending from an exhaust port of an internal combustion engine, the heat shield comprising: a first heat shield plate (Hoeptner; Fig. 4b – left most piece) for surrounding a curved section of the exhaust system member, the curved section being provided in the vicinity of the exhaust port; a second heat shield plate (Hoeptner; Fig. 4b – right most piece) for covering above a straight section of the exhaust system member, the straight section connecting to the curved section; and a band member (Hoeptner; Fig. 3, No. 26) for supporting the first heat shield plate on the exhaust system member, wherein the end section of the first heat shield plate away from the exhaust port is fixed tightly around the exhaust system member by the band member (Fig. 3), and the end section of the second heat shield plate extends forwardly over the band member (Hoeptner; Figures 4a and 4b), the end section of the second heat shield member being

fixed to the exhaust system member by an attachment fixture including a bolt (Hoeptner; Fig. 3, No. 28; Dodge; Fig. 1, No. 39), the attachment fixture providing a space between the second heat shield plate and the exhaust system member through which air passes during travel (Hoeptner; Fig. 3; Col. 2, Lines 33-48; Fig. 4b).

***Response to Arguments***

22. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

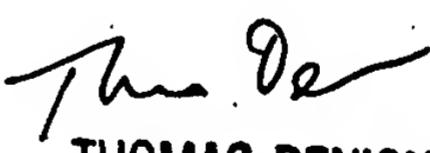
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loren C. Edwards whose telephone number is (571) 272-2756. The examiner can normally be reached on M-TH 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Loren Edwards  
(571) 272-2756



THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700